

B.E DEGREE EXAMINATIONS: DEC 2012

Second Semester

MEC103: MANUFACTURING TECHNOLOGY I

(Common to Mechanical and Automobile Engineering)

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Which pattern is used to complete castings by plane sweep?
 - a) Segmental pattern
 - b) Shell pattern
 - c) Skeleton pattern
 - d) Sweep pattern
2. The ability of the material to withstand high temperature is called as
 - a) Refractoriness
 - b) Permeability
 - c) Strength
 - d) Ductility
3. Mechanical working of a metal below its re-crystallization temperature is called
 - a) Hot working
 - b) Cold Working
 - c) Piercing
 - d) Welding
4. The metal to be joined are heated to a plastic state and forced together by external pressure is called
 - a) Plastic Welding
 - b) Pressure welding
 - c) Thermit welding
 - d) Soldering
5. A sheet metal is cut along a closed outline and if the part that is cut out is the desired product, then it is called
 - a) Drawing
 - b) Blanking
 - c) Punching
 - d) Shearing
6. In Rolling process which of the following stresses is involved
 - a) Tensile
 - b) Compressive
 - c) Shear
 - d) Shear and Tensile
7. Electro hydraulic forming, also known as
 - a) Electro spark forming
 - b) conditioning
 - c) mixing
 - d) tempering
8. The explosive charge in the form of cartridge is held in direct contact with the work piece
 - a) Contact Technique
 - b) Sintering
 - c) Blending
 - d) Compacting
9. Which of the following is a work holding device
 - a) Steady rest
 - b) Tool post
 - c) spindle
 - d) Lead screw

10. The operation of enlarging a hole already made by a single point boring tool is called as
- a) Facing
 - b) Boring
 - c) Drilling
 - d) Turning

PART B (10 x 2 = 20 Marks)

- 11. Define Core?
- 12. What is the use of Runners?
- 13. Define Fettling?
- 14. Distinguish between TIG and MIG?
- 15. Mention any four rolling defects?
- 16. List the advantages of forging of metals?
- 17. Write the applications of Electro Magnetic Forming?
- 18. What is the difference between standoff and contact technique in explosive forming?
- 19. What is the use of follower rest?
- 20. Define machinability?

PART C (5 x 14 = 70 Marks)

21. a) (i) What are the types of allowances in pattern making? (7)
- (ii) Give a brief note on types of pattern (7)

(OR)

- b) What are the defects in casting? Explain them with remedies

22. a) What is Resistance Welding? Explain the types of resistance welding with neat sketches

(OR)

- b) Explain the three special welding processes?

23. a) Define Rolling Process? Explain the types of Rolling mills in detail with neat sketches?

(OR)

- b) What is meant by Extrusion? Explain hot and cold extrusion process with neat sketches?

24. a) Write short notes on various types of sheet metal processes with relevant sketches?

(OR)

b) What is meant by special forming process? Explain Explosive Forming in Detail

25. a) Give the classifications of lathe? Explain various operations performed using lathe

(OR)

b) What are the types of the work holding devices used in lathe? Give the applications and precautions for each work holding device
